ENVIRONMENTAL CHEMISTS

Date of Report: March 4, 1996 Date Received: February 29, 1996

Project: Metro Self Monitor, PO #M52469 Date Samples Extracted: March 1, 1996 Date Extracts Analyzed: March 1, 1996

RESULTS FROM THE ANALYSIS OF THE PROCESS WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, AND ZINC **USING METHOD 6010**

Samples Processed Using Method 3005

Results Reported as mg/L (ppm)

Sample ID	Chromium	<u>Copper</u>	<u>Nickel</u>	Zinc
M52469	0.29	0.30	0.19	< 0.05
Method Blank	<0.05	<0.05	< 0.05	<0.05

ENVIRONMENTAL CHEMISTS

Date of Report: March 4, 1996 Date Received: February 29, 1996

Project: Metro Self Monitor, PO #M52469

QUALITY ASSURANCE RESULTS FOR CHROMIUM, COPPER, NICKEL, AND ZINC BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Samples Processed Using Method 3005

Laboratory Code: 66871 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance
Chromium	mg/L (ppm)	0.29	0.36		0-20
Copper	mg/L (ppm)	0.30	0.35		0-20
Nickel	mg/L (ppm)	0.19	0.24		0-20
Zinc	mg/L (ppm)	< 0.05	< 0.05	nm	0-20

Laboratory Code: 66871 (Matrix Spike)

	Reporting	Spike	Sample	% I	Recovery	Acceptance	Relative Percent
Analyte:	Units	Level	Result	MS	MSD	Criteria	Difference
Chromium	mg/L (ppm)	5	0.29	97	96	80-120	1
Copper	mg/L (ppm)	5	0.30	98	96	80-120	2
Nickel	mg/L (ppm)	10	0.19	97	97	80-120	0
Zinc	mg/L (ppm)	5	< 0.05	98	99	80-120	1

Laboratory Code: Spike Blank

	Reporting	Spike	%]	Recovery	Acceptance	Relative e Percent
Analyte:	Units	Level	MS	MSD	Criteria	
Chromium	mg/L (ppm)	5	98	100	80-120	2
Copper	mg/L (ppm)	5	100	101	80-120	1
Nickel	mg/L (ppm)	10	99	101	80-120	2
Zinc	mg/L (ppm)	5	100	101	80-120	1

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

b - Sample variation is attributed to the variability of fine particles present in the sample.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman James E. Bruya, Ph.D. (206) 285-8282 3012 16th Avenue West Seattle, WA 98119-2029 FAX: (206) 283-5044

March 4, 1996

Gerald Thompson, Project Manager Alaskan Copper Works 628 South Hanford Seattle, WA 98134

Dear Mr. Thompson:

Enclosed are the results from the testing of material submitted on February 29, 1996 from your Metro Self Monitor, PO #M52469 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson

Chemist

keh

Enclosures

FAX: 382-7335 ACU0304R.DOC

AKC-0012342

FRIEDMAN & BRUYA, INC. 3012 46th Avenue West Seattle, WA 98119-2029 (206) 285-8282

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ENVIRONMENTAL CHEMISTS

Andrew John Friedman James E. Bruya, Ph.D. (206) 285-8282 3012 16th Avenue West Seattle, WA 98119-2029 FAX: (206) 283-5044

March 4, 1996

INVOICE # 96ACU0304-1 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford Seattle, WA 98134

RE: Project Metro Self Monitor, PO #M52469: Results of testing requested by Gerald Thompson, Project Manager for material submitted on February 29, 1996.

1 process water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

Amount Due \$65.00